

REPORT OF THE UTILITIES DEPARTMENT
OF
THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

DOCKET NO. 2004-1-E
CAROLINA POWER & LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.

REPORT OF UTILITIES DEPARTMENT
SOUTH CAROLINA PUBLIC SERVICE COMMISSION

DOCKET NO. 2004-1-E

CAROLINA POWER & LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.

INDEX OF FUEL REPORT

Report of Fuel Adjustment Analysis-----	1 - 3
Exhibit No. 1 Power Plant Performance Data Report-----	4
Exhibit No. 2A Nuclear Unit Outage Report-----	5
Exhibit No. 2B Base Load Fossil Unit Outage Report-----	6
Exhibit No. 3 Generation Mix-----	7
Exhibit No. 4 Generation Statistics of Major Plants-----	8
Exhibit No. 5 Retail Comparison of MWH Sales-----	9
Exhibit No. 6 Retail Comparison of Fuel Costs-----	10
Exhibit No. 7 Retail Comparison of Fuel Costs (Graph)-----	11
Exhibit No. 8 Adjustment for Fuel Costs Rider-----	12
Exhibit No. 9 History of Cumulative Recovery Account-----	13
Exhibit No. 10 Projection of Cumulative Recovery Account	
Balance at various fuel factors for the period	
Ending March 2005-----	14

REPORT OF UTILITIES DEPARTMENT

SOUTH CAROLINA PUBLIC SERVICE COMMISSION

DOCKET NO. 2004-1-E

CAROLINA POWER & LIGHT COMPANY d/b/a PROGRESS ENERGY CAROLINAS, INC. REPORT OF FUEL ADJUSTMENT ANALYSIS

Scope of Examination

The Commission's Utilities Department Staff analyzed the Company's procedures and practices pertaining to its fuel operations. Staff's examination consisted of the following:

- 1) Review of the Company's monthly fuel reports including:
 - a) Power Plant Performance Data Reports
 - b) Major Unit Outage Reports
 - c) Generation Mix
 - d) Generation Statistics
 - e) Retail Comparison of MWH Sales
 - f) Retail Comparison of Fuel Costs
- 2) Review of the Company's currently approved Adjustment for Fuel Costs Rider.
- 3) History of Cumulative Recovery Account.
- 4) Calculation of fuel costs to be included in the base rates for April 2004 through March 2005.

REVIEW OF COMPANY'S MONTHLY FUEL REPORTS

The Company files with this Commission monthly reports that include power plant performance data, major unit outages, generation mix, and other reports that provide the Staff pertinent data on which to evaluate the Company's fuel operating expenses.

Selected information from the Power Plant Performance Data Reports for nuclear and fossil plants is shown on Exhibit No. 1. It includes a listing of capacity factors and equivalent availability factors by major unit by month for the period, and also includes the yearly capacity factors (2001-2003) and the lifetime (cumulative) capacity factors for the nuclear units. These factors are expressed as a percentage. This percentage figure can be a useful index when attempting to locate or identify a particular problem or unusual occurrence.

Pursuant to S.C. Code Ann. Section 58-27-865 (Supp. 2003) certain criteria are established for review of a utility's effort to minimize fuel expenses. In evaluating a utility's fuel costs under this section, it is necessary to examine and determine whether the utility has made every reasonable effort to minimize fuel costs associated with the operation of its nuclear generation system while "giving due regard to reliability of service, economical generation mix, generating experience of comparable facilities and minimization of the total cost of providing service."

The Nuclear Unit Outage Report considers each off-line outage experienced by unit, giving the inclusive dates of the outage, hours down, type of outage (Scheduled or Forced), the reason for the outage, and the corrective action taken. This information covers the period being considered in this proceeding and is shown in Exhibit No. 2A. Staff compiled this data through review of Company documents, NRC documents, and interviews with Company personnel. The Company's Nuclear Units performed very well during the period January 2003 through December 2003, accumulating an overall actual 98.5% capacity factor.

The Fossil Unit Outage Report is a listing of plants by unit, duration of outage (greater than 100 hours), reason for down time, and corrective action taken to return the unit to service. The information specifically reviewed for this proceeding is for the months of January 2003 through December 2003 and is included in Exhibit No. 2B. These Units' Availability Factors were in the 95 plus percentile for the greater portion of this period. The Company's base load fossil units achieved an equivalent availability of 91.5% for the period.

Staff reviewed and compiled a percentage Generation Mix statistic sheet for the Company's fossil, nuclear and hydraulic plants for January 2003 through December 2003. The fossil generation ranged from a high of 60% to a low of 44%. The nuclear generation ranged from a high of 55% to a low of 39%. The percentage of generation by hydro ranged from a high of 3% to a low of 1%. This information is included in Exhibit No. 3. The Staff also collected and reviewed certain Generation Statistics of Major Plants for the 12 months ending December 31, 2003. This data is presented in Exhibit No. 4. This Exhibit shows the Company's major plants by name, type of fuel used, fuel cost in cents per kilowatt-hour to operate and total megawatt-hours generated for the period. The nuclear fueled Harris Plant was lowest in cost at 0.44 cents per kilowatt-hour. The highest amount of generation of 14,667,363 megawatt-hours was produced at the Roxboro Station.

Utilities Department Exhibit No. 5 shows a comparison of the Company's original South Carolina retail megawatt-hour (MWH) estimated sales to the actual sales for the period from January 2003 through December 2003. The original projections ranged from an under-estimate of 4.66% in February 2003 to an over-estimate of 9.55% in November 2003 with a total over-estimate of 2.48% for the period.

Utilities Department Exhibit No. 6 shows a comparison of the Company's original fuel cost projections to the costs actually experienced for the months of January 2003 through December 2003. The original projections ranged from an over-estimate of 15.42% for October 2003 to an under-estimate of 19.62% for January 2003. The

difference between actual and original projection of these fuel costs is further delineated graphically on Utilities Department Exhibit No. 7.

REVIEW OF THE COMPANY'S CURRENTLY APPROVED RETAIL ADJUSTMENT FOR FUEL COSTS

Staff has reviewed the Company's currently approved Retail Adjustment for Fuel Costs Rider and found it to continue to operate properly and therefore Staff does not recommend any modifications at this time. Exhibit No. 8 is a copy of the Company's currently approved Adjustment for Fuel Costs Rider.

HISTORY OF THE CUMULATIVE RECOVERY ACCOUNT

Exhibit No. 9 is a history of the cumulative recovery account balances from inception in 1979 to December 2003.

CALCULATION OF BASE RATE FUEL COST COMPONENT FOR APRIL 2004 THROUGH MARCH 2005.

Utilizing the currently projected sales and fuel cost figures for the period April 2004 through March 2005 and including the projected under-recovery balance of \$6,038,891 in the cumulative recovery account through December 2003 (See Audit Exhibit G), the average fuel expense is estimated to be 1.519 cents per kilowatt-hour. Applying this fuel factor to the period would create an ending period estimated \$13,219 under-collection in the cumulative recovery account.

The Commission has consistently expressed its expectation that the Company exercise all reasonable prudence and efficiency in its fuel purchasing practices and aggressively control the operation and maintenance of its production facilities to assure the lowest fuel costs possible. Also, the Commission has directed the Staff to monitor the Company's plant operations and fuel purchasing to insure that any inefficient or negligent practice is brought to the Commission's attention.

Exhibit No. 10 is a table of Projections of the Cumulative Recovery Account for various fuel base levels for the twelve month period ending March 2005. Also indicated in the table are the projected results using the current fuel factor base component of 1.471 cents/kWh which is also the Company's proposed factor in this proceeding.

CAROLINA POWER & LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.
POWER PLANT PERFORMANCE DATA (%) REPORT

CAPACITY FACTOR	MW RATING	LIFE TIME	YEAR 2001	YEAR 2002	YEAR 2003	JAN 2003	FEB 2003	MAR 2003	APR 2003	MAY 2003	JUN 2003	JUL 2003	AUG 2003	SEP 2003	OCT 2003	NOV 2003	DEC 2003
BRUNSWICK 1	872	66.5	101.7	93.2	100.8	96.5	104.2	103.4	103.0	103.0	101.9	89.3	101.5	101.7	103.2	99.7	103.1
BRUNSWICK 2	811	64.0	92.1	99.6	98.9	103.0	98.9	20.6	86.1	111.7	100.5	104.5	102.5	102.4	105.2	89.2	110.7
HARRIS 1	900	83.7	71.3	99.3	91.8	104.2	103.9	103.4	85.0	29.9	90.4	100.9	84.6	90.6	102.9	103.2	103.9
ROBINSON 2	710	73.5	92.2	93.7	103.5	105.8	105.0	105.5	104.5	102.5	102.2	101.3	101.2	101.8	103.6	103.6	105.7
TOTAL NUCLEAR	3293	70.8	88.9	96.7	98.50	102.2	102.9	82.9	94.0	85.1	98.5	98.9	97.2	98.9	103.7	98.7	105.8

AVAILABILITY FACTOR	MW RATING	YEAR 2003	JAN 2003	FEB 2003	MAR 2003	APR 2003	MAY 2003	JUN 2003	JUL 2003	AUG 2003	SEP 2003	OCT 2003	NOV 2003	DEC 2003
MAYO 1	745	86.5	98.8	84.8	100.0	92.1	100.0	100.0	99.8	99.7	98.6	8.8	58.0	98.3
ROXBORO 2	670	88.2	100.0	78.0	95.1	38.9	81.2	97.8	82.1	96.3	88.4	100.0	95.6	100.0
ROXBORO 3	707	93.9	99.9	96.0	94.4	98.5	94.0	100.0	100.0	99.5	99.8	99.0	48.2	96.9
ROXBORO 4	700	97.3	99.7	100.0	89.8	95.7	99.7	97.5	96.8	97.0	100.0	100.0	100.0	91.8
BRUNSWICK 1	872	97.8	93.0	100.0	99.3	99.1	100.0	99.9	87.9	99.7	99.3	100.0	96.7	100.0
BRUNSWICK 2	811	89.2	100.0	98.3	22.6	77.0	98.2	97.6	100.0	98.5	98.0	100.0	85.0	97.1
HARRIS 1	900	90.0	100.0	100.0	100.0	83.3	36.3	89.3	100.0	84.3	88.6	100.0	100.0	99.8
ROBINSON 2	710	99.8	100.0	99.3	100.0	100.0	99.7	100.0	100.0	100.0	100.0	100.0	99.1	100.0

DOCKET NO. 2004-1-E
 UTILITIES DEPARTMENT
 EXHIBIT NO. 1

CAROLINA POWER & LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.
NUCLEAR UNIT OUTAGE REPORT
January 1, 2003 – December 31, 2003

NO. DATE OFF DATE ON HOURS/TYPE* REASON FOR OUTAGE AND CORRECTIVE ACTION

BRUNSWICK UNIT 1

- | | | | | |
|----|----------|----------|---------|---|
| 1. | 01/12/03 | 01/14/03 | 37.95/F | Unit tripped due to oil pressure sensing circuitry failure on reactor feed pump protection equipment. |
| 2. | 07/01/03 | 07/03/03 | 68.80/F | Unit removed from service to replace leaking valve in reactor recirculating system. |

BRUNSWICK UNIT 2

- | | | | | |
|----|---------------------------------|---------------------------------|-----------------------------|---|
| 1. | 03/07/03
11-4-03
11/08/03 | 04/06/03
11-8-03
11/09/03 | 700.37/S
96.27/27-87/F-7 | Scheduled refueling and planned major outage activities including overhaul of the high pressure turbine and replacement of both reactor FW pump turbines.
Generator exciter failed, was repaired and unit returned to service. |
|----|---------------------------------|---------------------------------|-----------------------------|---|

HARRIS UNIT 1

- | | | | | |
|----|----------|----------|----------|---|
| 1. | 04/26/03 | 05/20/03 | 569.68/S | Refueling and maintenance outage. |
| 2. | 06/14/03 | 06/16/03 | 45.85/F | Repaired faulty electronic control card located in the FW control system. |

ROBINSON UNIT 2

- | | | | | |
|----|----------|----------|---------|--|
| 1. | 08/17/03 | 08/19/03 | 37.93/F | Unit manually tripped due to failure of the "A" Condensate Pump Motor. |
|----|----------|----------|---------|--|

TYPE* F- Forced S- Scheduled

CAROLINA POWER & LIGHT COMPANY
 d/b/a PROGRESS ENERGY CAROLINAS, INC.
 BASE LOAD FOSSIL UNIT OUTAGE REPORT
 (100 HRS OR GREATER DURATION)
 January 1, 2003 – December 31, 2003

<u>MONTH</u>	<u>UNIT</u>	<u>HRS/TYPE*</u>	<u>REASON FOR OUTAGE AND CORRECTIVE ACTION</u>
JAN	None		
FEB	Roxboro 2	101.48/S	Repairs made to leaks in the boiler duct system.
MAR	Roxboro 4	101.62/S	Unit removed from service on March 28, for annual boiler inspection and other corrective maintenance which continued until April 2, 2003.
APR	Roxboro 2	372.60/S	Unit removed from service for boiler inspection, as well as other maintenance activities.
MAY	None		
JUN	None		
JUL	None		
AUG	None		
SEP	None		
OCT	Mayo 1	809.37/S	Unit removed from service to install plant's selective catalytic removal system (SCR), boiler inspection and routine maintenance. Outage extended from Oct 3 through Nov 6.
NOV	Roxboro 3	315.67/S	Annual boiler inspection and routine preventative maintenance.
DEC	None		
TYPE* F – Forced S - Scheduled			

CAROLINA POWER & LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.

GENERATION MIX

JANUARY 1, 2003 - DECEMBER 31, 2003

2003 MONTH	FOSSIL %	NUCLEAR %	HYDRO %
JANUARY	59	40	1
FEBRUARY	55	43	2
MARCH	57	40	3
APRIL	50	47	3
MAY	54	44	2
JUNE	53	45	2
JULY	57	41	2
AUGUST	60	39	1
SEPTEMBER	52	47	1
OCTOBER	44	55	1
NOVEMBER	48	51	1
DECEMBER	54	44	2

CAROLINA POWER & LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.

GENERATION STATISTICS OF MAJOR PLANTS

JANUARY 1, 2003 - DECEMBER 31, 2003

PLANT	TYPE FUEL	AVERAGE FUEL COST (CENTS/KWH*)	GENERATION (MWH)
Harris	Nuclear	0.44	6,066,713
Robinson 2	Nuclear	0.45	6,439,899
Brunswick 1	Nuclear	0.45	6,290,083
Brunswick 2	Nuclear	0.45	5,739,843
Robinson 1	Coal	1.85	1,069,146
Weatherspoon	Coal	2.44	674,090
Asheville	Coal	1.78	2,417,948
Roxboro	Coal	2.00	14,667,363
Sutton	Coal	2.06	2,888,217
Cape Fear	Coal	1.88	1,659,929
Mayo	Coal	2.12	3,422,473
Lee	Coal	1.91	1,722,785

(*) The average fuel costs for coal-fired plants include oil cost for start-up and flame stabilization.

CAROLINA POWER & LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.
SOUTH CAROLINA RETAIL COMPARISON OF ESTIMATED TO ACTUAL ENERGY SALES FOR 2003

	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>	<u>TOTAL</u>
[1] ESTIMATED SALES [MWH]	669,901	607,449	568,359	551,274	556,870	566,624	675,213	713,575	655,975	538,161	548,108	598,238	7,249,747
[2] ACTUAL SALES [MWH]	621,818	637,116	545,410	524,228	530,278	585,897	653,360	669,321	657,813	537,966	500,313	610,568	7,074,088
[3] AMOUNT DIFFERENCE [1]-[2]	48,083	-29,667	22,949	27,046	26,592	-19,273	21,853	44,254	-1,838	195	47,795	-12,330	175,659
[4] PERCENT DIFFERENCE [3]/[2]	7.73%	-4.66%	4.21%	5.16%	5.01%	-3.29%	3.34%	6.61%	-0.28%	0.04%	9.55%	-2.02%	2.48%

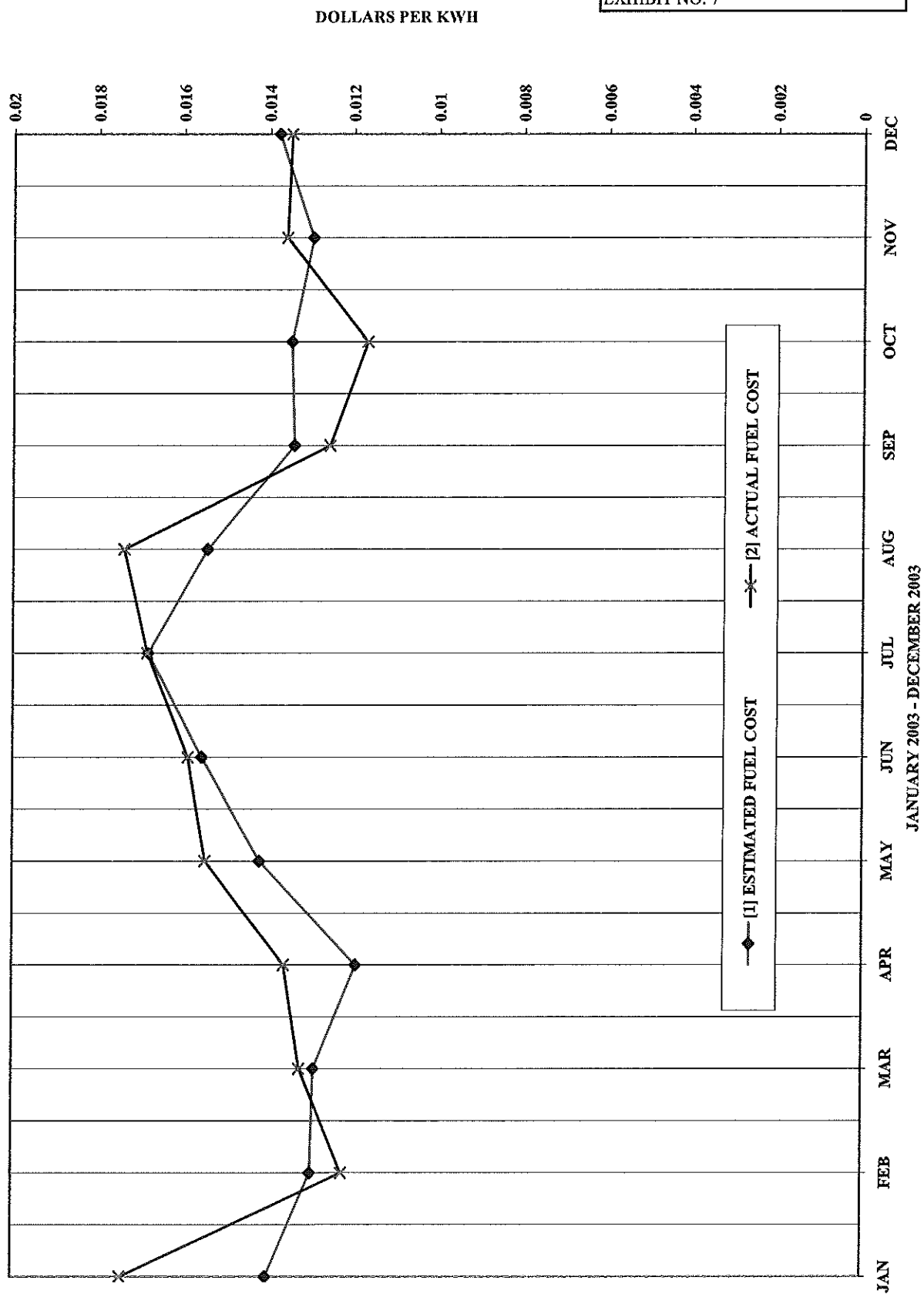
DOCKET NO. 2004-1-E
UTILITIES DEPARTMENT
EXHIBIT NO. 5

CAROLINA POWER & LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.
SOUTH CAROLINA RETAIL COMPARISON OF ESTIMATED TO ACTUAL FUEL COST FOR 2003

	<u>JAN</u>	<u>FEB</u>	<u>MAR</u>	<u>APR</u>	<u>MAY</u>	<u>JUN</u>	<u>JUL</u>	<u>AUG</u>	<u>SEP</u>	<u>OCT</u>	<u>NOV</u>	<u>DEC</u>
[1] ESTIMATED FUEL COST PROJECTION	0.01401	0.01297	0.01290	0.01191	0.01419	0.01556	0.01682	0.01544	0.01340	0.01347	0.01297	0.01377
[2] ACTUAL FUEL COST EXPERIENCE	0.01743	0.01223	0.01323	0.01361	0.01548	0.01588	0.01684	0.01739	0.01256	0.01167	0.01359	0.01348
[3] AMOUNT IN BASE	0.01471	0.01471	0.01471	0.01471	0.01471	0.01471	0.01471	0.01471	0.01471	0.01471	0.01471	0.01471
[4] VARIANCE FROM ACTUAL [1-2]/[2]	-19.62%	6.05%	-2.49%	-12.49%	-8.33%	-2.02%	-0.12%	-11.21%	6.69%	15.42%	-4.56%	2.15%

DOCKET NO. 2004-1-E
UTILITIES DEPARTMENT
EXHIBIT NO. 6

CAROLINA POWER & LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.
ESTIMATED TO ACTUAL FUEL COST



DOCKET NO. 2004-1-E
UTILITIES DEPARTMENT
EXHIBIT NO. 7

Carolina Power & Light Company
 (South Carolina Only)

RIDER NO. 39U
 ADJUSTMENT FOR FUEL COSTS

APPLICABILITY

This adjustment is applicable to and is a part of the Utility's South Carolina retail electric rate schedules.

The Public Service Commission has determined that the costs of fuel in an amount to the nearest one-thousandth of a cent, as determined by the following formula, will be included in the base rates to the extent determined reasonable and proper by the Commission:

$$F = \frac{E}{S} + \frac{G}{S_1}$$

Where:

F = Fuel cost per kilowatt-hour included in base rate, rounded to the nearest one-thousandth of a cent.

E = Total projected system fuel costs:

- (A) Fuel consumed in the Utility's own plants and the Utility's share of fuel consumed in jointly owned or leased plants. The cost of fossil fuel shall include no items other than those listed in Account 151 of the Commission's Uniform System of Accounts for Public Utilities and Licensees and the cost of SO₂ emission allowances recorded in FERC Account 509 (allowance cost). The cost of nuclear fuel shall be that as shown in Account 518 excluding rental payments on leased nuclear fuel and except that, if Account 518 also contains any expense for fossil fuel which has already been included in the cost of fossil fuel, it shall be deducted from this account.

Plus

- (B) Purchased power fuel costs and allowance costs such as those incurred in unit power and Limited Term power purchases where the fuel costs and applicable allowance cost associated with energy purchased are identifiable and are identified in the billing statement.

Plus

- (C) Interchange power fuel costs and applicable allowance cost such as Short Term, Economy, and other where the energy is purchased on economic dispatch basis.

Energy receipts that do not involve money payments such as Diversity energy and payback of storage energy are not defined as purchased or interchange power relative to this fuel calculation.

Minus

- (D) The cost of fuel and applicable allowance cost recovered through intersystem sales including the fuel costs and applicable allowance cost related to economy energy sales and other energy sold on an economic dispatch basis.

Energy deliveries that do not involve billing transactions such as Diversity energy and payback of storage are not defined as sales relative to this fuel calculation.

S = Projected system kilowatt-hour sales excluding any intersystem sales.

G = Cumulative difference between jurisdictional fuel revenues billed and fuel expenses at the end of the month preceding the projected period utilized in E and S.

S₁ = Projected jurisdictional kilowatt-hour sales for the period covered by the fuel costs included in E.

The appropriate revenue-related tax factor is to be included in these calculations.

The fuel cost (F) as determined by Public Service Commission of South Carolina is 1.471 cents per kilowatt-hour, which shall remain in effect until superseded by a subsequent Commission order.

Supersedes Rider No. 39T

Effective for bills rendered on and after April 1, 2002

CAROLINA POWER & LIGHT COMPANY

d/b/a PROGRESS ENERGY CAROLINAS, INC.

HISTORY OF CUMULATIVE RECOVERY ACCOUNT

<u>PERIOD ENDING</u>	<u>OVER (UNDER) \$</u>
March 1979 – Automatic Fuel Adjustment in Effect	
December 1979	1,104,730
September 1980	(12,000,131)
March 1981	(4,060,364)
August 1981	(12,113,832)
March 1982	(935,412)
September 1982	(6,881,796)
March 1983	(2,259,114)
September 1983	(3,264,694)
March 1984	109,270
September 1984	2,172,859
March 1985	(2,317,008)
September 1985	745,913
March 1986	1,972,280
September 1986	(696,805)
March 1987	2,408,354
September 1987	3,310,059
March 1988	(3,964,888)
September 1988	(5,737,541)
March 1989	(8,125,496)
September 1989	(5,875,641)
March 1990	(9,311,149)
September 1990	(658,614)
March 1991	1,403,023
September 1991	4,661,988
March 1992	5,201,112
September 1992	(6,712,920)
March 1993	(9,563,180)
September 1993	0*
March 1994	(1,010,684)
September 1994	1,975,939
March 1995	7,408,161
September 1995	2,011,489
December 1996	186,139
December 1997	(6,212,396)
December 1998	(14,334,022)
December 1999	(17,967,157)**
December 2000	(18,627,471)
December 2001	(9,906,921)
December 2002	(7,393,266)
December 2003	(6,038,891)

*Eliminated \$14,011,263 per Commission Order No. 93-865

**Reduced by \$6,500,000 per Commission Order No. 1999-324

CAROLINA POWER & LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.

PROJECTIONS OF THE CUMULATIVE RECOVERY ACCOUNT
FOR THE TWELVE MONTH PERIOD ENDING
MARCH 2004

	FUEL BASE	PROJECTED CUMULATIVE OVER/(UNDER) RECOVERY (\$)
	1.200	(22,731,863)
	1.300	(15,610,031)
	1.400	(8,488,199)
	1.450	(4,927,283)
	1.470	(3,502,917)
CURRENT FACTOR	1.471	(3,431,698)
	1.475	(3,146,825)
	1.490	(2,078,550)
	1.500	(1,366,367)
	1.517	(155,656)
	1.518	(84,437)
ZERO UNDER	1.519	(13,219)
ZERO OVER	1.520	57,999
	1.521	129,218
	1.525	414,091
	1.550	2,194,549
	1.575	3,975,007
	1.600	5,755,465
	1.650	9,316,381
	1.700	12,877,297
	1.800	19,999,129